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NOTICE OF ALLOWANCE AND FEE(S) DUE

23117 7590 01/27/2009

NIXON & VANDERHYE, PC
901 NORTH GLEBE ROAD, 11TH FLOOR
ARLINGTON, VA 22203

EXAMINER

BERMAN, SUSAN W

ART UNIT

PAPER NUMBER

1796

DATE MAILED: 01/27/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/568,453	01/18/2007	Atsuya Takahashi	4676-68	8209
TITLE OF INVENTION: RADIATION-CURABLE LIQUID RESIN COMPOSITION				

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	04/27/2009

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. **PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN **THREE MONTHS** FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
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INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

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NIXON & VANDERHYE, PC
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 ARLINGTON, VA 22203

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I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/568,453	01/18/2007	Atsuya Takahashi	4676-68	8209

TITLE OF INVENTION: RADIATION-CURABLE LIQUID RESIN COMPOSITION

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nonprovisional	NO	\$1510	\$300	\$0	\$1810	04/27/2009

EXAMINER	ART UNIT	CLASS-SUBCLASS
BERMAN, SUSAN W	1796	385-114000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB-122) attached.
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB-47; Rev 03-02 or more recent) attached. Use of a **Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
 (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
☐ Publication Fee (No small entity discount permitted)
☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date _____
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This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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			ART UNIT	PAPER NUMBER

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Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 205 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 205 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability

Application No.

10/568,453

Applicant(s)

TAKAHASHI ET AL.

Examiner

/Susan W. Berman/

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment filed 11-05-2008.
2. ☒ The allowed claim(s) is/are 1-3,5-11 and 13-18.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date ____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date ____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other ____.

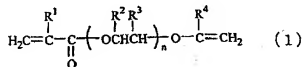
EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Bryon H. Davidson on 01-15-2009.

The application has been amended as follows:

1. (currently amended) A radiation-curable liquid resin composition comprising:
 - (A) 20-90 wt% of a urethane (meth)acrylate oligomer component comprised of at least first and second different urethane (meth)acrylate oligomers, wherein the first, wherein 10-80 wt% of the urethane (meth)acrylate oligomer is present in an amount of 10-80 wt.% and is the reaction product of obtained by reacting a polyisocyanate compound (b) and a hydroxy-functional ethylenically unsaturated monomer (c), and
 - (B) 1-35 wt% of a monomer component according to shown by the following formula (1),



wherein R¹ represents a hydrogen atom or a methyl group, R² and R³ individually represent a hydrogen atom or an alkyl group having 1-4 carbon atoms, R⁴ represents a hydrogen atom or a methyl group, and n represents an integer of 1-6.

2. (currently amended) The radiation-curable liquid resin composition according to claim 1, comprising 65-90 wt% of the urethane (meth)acrylate oligomer component (A).
3. (currently amended) The radiation-curable liquid resin composition according to claim 1, wherein the ~~second urethane (meth)acrylate oligomer of the~~ urethane (meth)acrylate oligomer component (A) is the reaction product of ~~is obtained by reacting~~ a polyol compound (a), ~~[[the]] a~~ polyisocyanate compound (b₁), and ~~[[the]] a~~ hydroxy-functional ethylenically unsaturated monomer (c₁).
4. (canceled)
5. (currently amended) The radiation-curable liquid resin composition according to claim 1, wherein the urethane (meth)acrylate oligomer component (A) comprises 10-50 wt% of the first urethane (meth)acrylate oligomer ~~is obtained by reacting the polyisocyanate compound (b) and the hydroxy-functional ethylenically unsaturated monomer (c).~~
6. (currently amended) The radiation-curable liquid resin composition according to claim ~~[[1]]~~ 5, wherein the second ~~further comprising a~~ urethane (meth)acrylate oligomer is the reaction product of ~~obtained by reacting~~ a polyol compound (a), a polyisocyanate (b₁), and a hydroxy-functional ethylenically unsaturated monomer (c₁).
7. (currently amended) The radiation-curable liquid resin composition according to claim 1, wherein the first urethane (meth)acrylate oligomer is the reaction product of ~~obtained by reacting~~ 2-hydroxyethyl (meth)acrylate and 2,4-tolylene diisocyanate.
8. (currently amended) The radiation-curable liquid resin composition according to claim 1, wherein the monomer (B) is at least one compound selected ~~chosen~~

from the group consisting of 2-(2'-vinylxyethoxy)ethyl (meth)acrylate and 2-vinylxyethyl (meth)acrylate.

9. (currently amended) The radiation-curable liquid resin composition according to claim 1, further comprising a reactive diluent (C) which is different than the monomer wherein (C) is not covered by the definition of component (B).
10. (original) The radiation-curable liquid resin composition according to claim 9 comprising 1-33 wt% of reactive diluent (C).
11. (previously presented) The radiation-curable liquid resin composition according to claim 1, wherein the composition has a viscosity of 1.0-6.0 Pa·s at 25°C.
12. (canceled)
13. (previously presented) A coated optical fiber comprising a glass optical fiber and having a primary coating, a coated optical fiber comprising a glass optical fiber having a primary coating and a secondary coating, a coated optical fiber comprising a glass optical fiber having a primary coating, a secondary coating and an upjacketing coating, a coated optical fiber comprising a glass optical fiber and a single coating, a coated optical fiber comprising a glass optical fiber, a single coating and an upjacketing coating, and each coated fiber optionally having an ink composition applied thereon, and to an optical fiber ribbon comprising at least two of said coated and optionally inked optical fibers wherein at least one of said coating surrounding the glass optical fiber, wherein the at least one coating is a cured product of the or composition is derived from a radiation-curable composition according to as described in claim 1.
14. (currently amended) Coated and optionally inked optical fiber comprising a glass optical fiber having a primary coating, a secondary coating, and optionally an ink composition applied thereon, wherein at least one of said the primary coating, the

- ~~secondary coating and the coatings or ink composition compositions is a cured product of the derived from a radiation-curable composition according to claim 1.~~
15. (currently amended) An optical fiber ribbon comprising a plurality of coated and optionally inked optical fibers according to claim [[13]] 14, ~~and held together by a matrix material~~ for holding the plurality of optical fibers together.
 16. (previously presented) An optical fiber ribbon comprising a plurality of coated and optionally inked optical fibers held together by a matrix material, wherein the matrix material is a cured product of the derived from a radiation-curable resin composition according to claim 1.
 17. (new) A coated optical fiber according to claim 13, wherein the at least one coating is selected from the group consisting of a primary coating, a secondary coating, and an upjacketing coating.
 18. (new) A coated and inked optical fiber comprising a glass optical fiber, at least one coating surrounding the glass optical fiber and an ink composition applied to the at least one coating, wherein the ink composition is a cured product of the radiation-curable resin composition according to claim 1.

The following is an examiner's statement of reasons for allowance: The claims are amended to distinguish over the prior art by clearly reciting that 10-80 wt.% of the urethane (meth)acrylate oligomer is an oligomer that is the reaction product of a polyisocyanate compound and a hydroxy-functional ethylenically unsaturated monomer. The prior art of record and otherwise known to the examiner teaches urethane (meth)acrylate reaction products of a polyol, a polyisocyanate and a hydroxy-functional ethylenically unsaturated monomer in combination with a (meth)acrylate having a vinyl ether group as shown by formula (1) in instant claim 1.

Steinmann et al (5,605,941) is cited as the closest prior art of interest. Steinmann et al disclose compounds containing a (meth)acrylate groups and a vinyl ether group useful in compositions for stereolithography, however, the compounds are not of formula (1) as set forth in instant claim 1 (column 1, lines 60-67, and column 2, lines 40-67). Urethane acrylates corresponding to those set forth in the instant claims are taught in column 15, lines 34-43.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to /Susan W. Berman/ whose telephone number is 571 272 1067. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571 272 1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SB
1/15/2009

/Susan W Berman/
Primary Examiner
Art Unit 1796